The Effect of Am-80, One of Retinoids Derivatives on Experimental Allergic Encephalomyelitis in Rats.
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The effect of Am-80, a synthetic retinoid, on EAE in DA rats was examined. Am-80 diminished the clinical symptoms and infiltration of inflammatory cells in a dose-dependent manner. After stopping administration, however, EAE recurred. Transcriptional levels of IL-6, IFN-γ and TNF-α were parallel with the clinical symptoms of the disease in Am-80-treated rats. Present results suggest that inhibition of EAE by Am-80, in part, related to the inhibition of IL-6 production.

Effects of an Amphoteric Antiallergic Agent, HSR-609, on Antigen-induced Late Phase Nasal Eosinophilia in Brown Norway Rats.
Keiichi MUSOH, Nobuaki NAKAMURA and Hiroichi NAGAI*

An experimental rhinitis model was established in BN rats, and the effect of a newly synthesized compound, HSR-609, on the rhinitis was investigated. Repeated exposure to antigen resulted in the increase in the number of inflammatory cells in the nasal cavity lavage fluid. Antigen-specific IgG and IgE were detected in the sera. HSR-609 inhibited the increase in the number of eosinophils in the nasal cavity lavage fluid.

Interleukin-4 Is Involved in Allergen-induced Airway Eosinophilic Inflammation and Bronchial Hyperresponsiveness Independent of Genetic Background.
Hiroyuki TANAKA, Naoki KAWADA, Takatoshi YAMADA, Kenji KAWADA and Hiroichi NAGAI*

The role of IL-4 in the development of antigen-induced airway inflammation and bronchial hyperresponsiveness was examined in IL-4-gene-deficient BALB/c and C57BL/6 mice. In BALB/c mice, allergen challenge caused airway eosinophilia, bronchial hyperresponsiveness and increased level of serum IgE. In C57BL/6 mice, allergen-induced eosinophilia and hyperresponsiveness were moderate and serum IgE was not detectable. IL-4 gene disruption in both strains of mice abolished the allergen-induced eosinophilia, hyperresponsiveness and IgE production.

Inhibition of Passive Cutaneous Anaphylaxis-associated Scratching Behavior by μ-Opioid Receptor Antagonists in ICR Mice.
Naoki INAGAKI*, Nobuaki NAKAMURA, Masafumi NAGAO, Hirokazu KAWASAKI and Hiroichi NAGAI

Effects of opioid μ-receptor antagonists on the scratching behavior in ICR mice were investigated. Scratching behavior was induced by IgE-mediated PCA, compound 48/80 injection and histamine injection. Naloxone and nalmefene reduced the incidence of scratching behavior associated with PCA. Naloxone also inhibited the induction of scratching behavior caused by compound 48/80 and histamine. Naloxone did not affect the increase in vascular permeability caused by PCA and compound 48/80 injection.